

Claims

1. A liquefied natural gas (LNG) terminal comprising:
 - a mooring/docking facility for at least one LNG ship;
 - a first stage pumping system to transfer the LNG from the LNG ship to a second stage pumping system;
 - the second stage pumping system providing sufficient pressure to move the LNG through a conventional vaporizer system and into an uncompensated salt cavern, the vaporizer system having sufficient reinforcing to withstand the pressures of the second stage pumping system; and
 - the conventional vaporizer system warming the LNG to a temperature compatible with the uncompensated salt cavern, using a warmant selected from the group consisting of seawater, fresh water and warmants from industrial processes.
2. A liquefied natural gas (LNG) terminal comprising:
 - a mooring/docking/docking facility for at least one LNG ship;
 - a first stage pumping system to transfer the LNG from the LNG ship to a second stage pumping system;
 - the second stage pumping system providing sufficient pressure to move the LNG through a conventional vaporizer system and into an uncompensated salt cavern;
 - the conventional vaporizer system warming the LNG to a temperature compatible with the uncompensated salt cavern, using a warmant selected from the group consisting of seawater, fresh water and warmants from industrial processes.

3. The terminal of claim 2 wherein the mooring/docking facility is selected from the group consisting of a dock, an offshore platform, a dolphin, a single point mooring/docking and multiple anchor mooring/docking lines.

4. The terminal of claim 2 wherein the conventional vaporizer system is selected from the group consisting of heated vaporizers, integral heated vaporizers, remotely heated vaporizers, ambient heated vaporizers (a/k/a open rack vaporizers), and process vaporizers.

5. A fluid handling terminal comprising:

- a mooring/docking facility for at least one transport ship carrying a cryogenic liquid;
- a low pressure pumping system to transfer the cryogenic liquid from the transport ship to a high pressure pumping system;
- the high pressure pumping system raising the pressure of the cryogenic liquid to convert the cryogenic liquid into a dense phase fluid, the high pressure pumping system also providing sufficient pressure to move the dense phase fluid through a conventional vaporizer system and transfer the dense phase fluid into an uncompensated salt cavern, the conventional vaporizer system being modified and strengthened to withstand the high pressure of the dense phase fluid from the high pressure pumping system;
- the conventional vaporizer system warming the LNG to a temperature compatible with the uncompensated salt cavern, using a warmant selected from the group consisting of seawater, fresh water and warmants from industrial processes.

6. The terminal of claim 5 wherein the mooring/docking facility is selected from the group consisting of a dock, an offshore platform, a dolphin, a single point mooring/docking and multiple anchored mooring/docking lines.

7. The terminal of claim 5 wherein the conventional vaporizer system is selected from the group consisting of heated vaporizers, integral heated vaporizers, remotely heated vaporizers, ambient heated vaporizers (a/k/a open rack vaporizers), and process vaporizers.